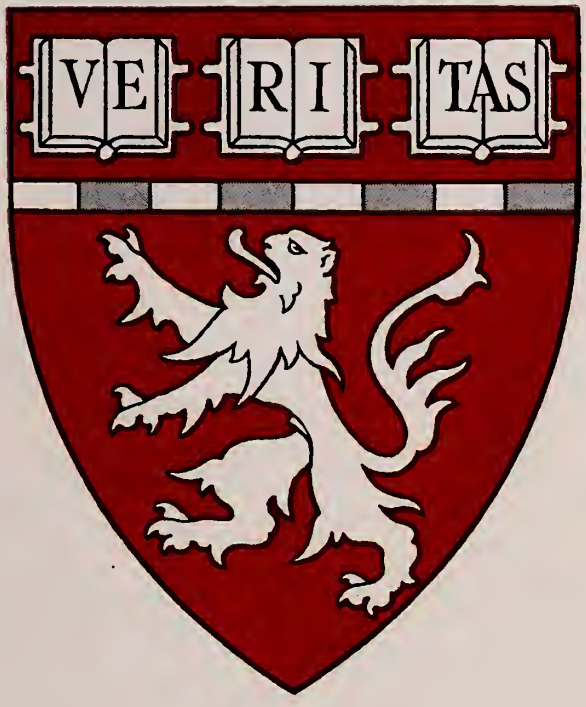
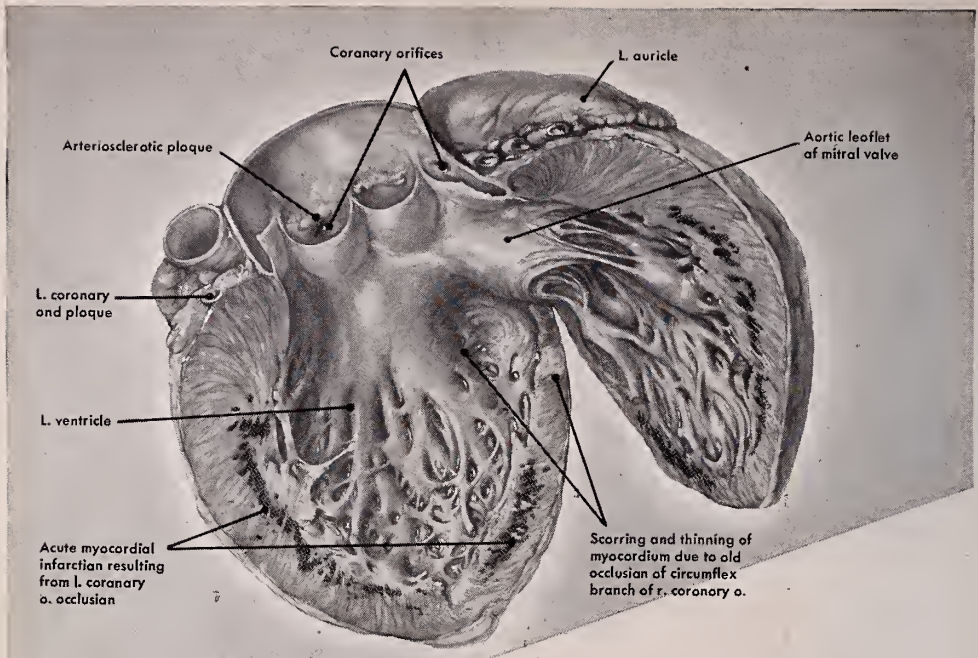
HARVARD MEDICAL ALUMNI BULLETIN

January, 1954



Arms of the
Medical School
in Harvard University



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"... in correcting the state of shock we have enabled certain patients to recover from the initial episode, which otherwise gave every indication of culminating in death."[1]

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"Severe cardiogenic shock demands therapy... the most efficacious method of treatment now available is use of vasopressor drugs."[4] "Current usage favors nor-epinephrine."[5]

References:

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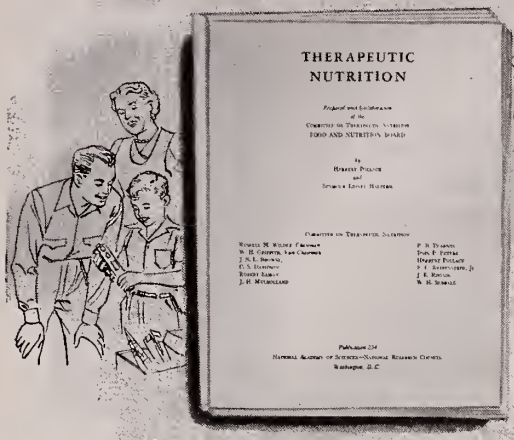

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Ascorbic acid	300 mg.
Vitamin B_{12}	4 mcg.

1 or more capsules daily. Bottles of 30 and 100.

* Therapeutic Nutrition, Publication No. 234, National Research Council.

Harvard Medical Alumni Bulletin

VOLUME 28 JANUARY 1954 NUMBER 2

Contents

Mrs. Pusey receives at the Faculty Wives' Tea

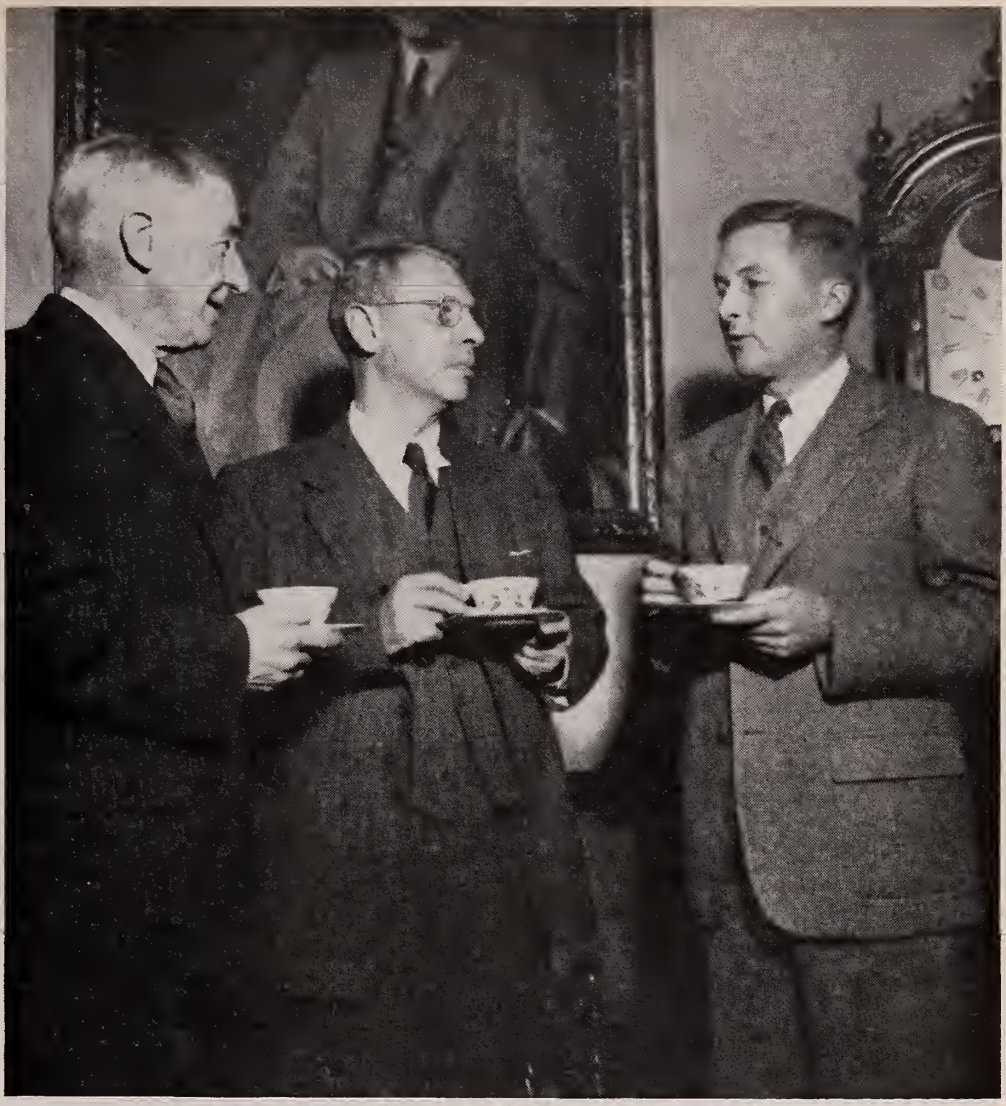
President and Mrs. Pusey Visit the Medical School

President and Mrs. Pusey were honored at a reception given by the Dean and the Officers and Council of the Faculty Wives Teas on November 10, 1953. The recently redecorated Faculty Room made an attractive setting for the occasion which was attended by over four hundred guests, including members of the Faculties of Medicine and Public Health and their wives, the presidents of the Affiliated Hospitals, and other friends of the School. Tea and sherry were served in the foyer of Building A.

The reception provided a rare opportunity for all the members of the Faculty located in both the hospitals and at the School to get together socially.

On December 8, 1953, Mrs. Pusey was a guest at the first of the regular Faculty Wives Teas, which honored new-comers, women students, and student wives. Mrs. Pusey received with Mrs. George W. Thorn and Mrs. Roy O. Greep.

Thus the Puseys have been well introduced to the Harvard Medical School family, both officially and socially.



Dr. Lanman, Dean Berry and Mr. Pusey at Faculty Meeting

Mr. Pusey was present at his first faculty meeting on December 4, 1953, thus continuing a tradition which was inaugurated by President Eliot, who attended his first Medical Faculty meeting on November 26, 1869, in the home of Dr. Bigelow on Beacon Street. At that time, in addition to the President, there were present a total of seven Faculty members. On December 4, 1953, there were present eighty-nine Faculty members. The tradition of a joint meeting of the Medical Faculty with the President is highly significant as representing the oneness of Harvard University.

Mr. Pusey opened the meeting by expressing his pleasure at being present, and his hope to become more familiar with the Medical School, and to extend the acquaintances which he had begun at the recent tea given by the Faculty in his honor. In his capacity as presiding officer, he commented on the comprehensiveness of the minutes. Throughout the meeting he presided with skill and effectiveness. During the course of a discussion on the integrated teaching of medicine he noted with interest the increase in the trend to provide medical education rather than medical training in the Harvard Medical School, a policy which is being pursued with ever greater vigor throughout the University as a whole.

Some Remarks About the Old Children's Hospital

WILLIAM E. LADD, '06

I was appointed to the Visiting Staff of the Children's Hospital in 1910, just forty-three years ago. The hospital at that time was situated on Huntington Avenue near Symphony Hall, and its size and organization were very different from the present hospital. The organization was entirely a charity affair, there were no private patients and no member of the medical staff received any remuneration from the hospital. This, of course, had drawbacks, but also advantages. It meant that there was no one on the staff who was not on it for the love of the game, and this gave the staff an *esprit de corps* which proved a potent factor in the later success and development of the hospital.

There were three main departments: medicine, headed by Dr. Thomas M. Rotch; orthopedic surgery, headed by Dr. E. H. Bradford; and general surgery, headed by Dr. H. L. Burrell.* For different reasons I knew all three of these men quite well. I knew Dr. Bradford because he was a friend of my family and I had known him since boyhood. He was a very lovable character. In case you doubt this statement, I will inform you that some years later he became Dean of the Harvard Medical School. He was not a good business man and put the School deeper in the red than it had ever been before. This perplexed him greatly and so he called in all the teaching surgeons and frankly told them of his difficulty. With no dissenting voice they agreed to carry on their teaching assignments without any pay. The sequal to this incident was interesting, for in that particular year a large sum of money became available by which to double teachers' salaries. This proved a bit rough on the surgeons, since twice nothing makes just exactly nothing. However, the incident was certainly a great tribute to Dr. Bradford, and an example of the esteem in which he was held by his fellow surgeons.

I first came to know General Burrell when I acted as his personal errand boy or aide during the meeting of the A. M. A. here in 1906. He was president of the Association in that year. Dr. Burrell did not excel as a technical surgeon, but the Children's Hospital and the Harvard Medical School owe a good deal to his vision. He was entirely responsible for the marsh land between the present School and Muddy River being turned into Louis Pasteur Avenue. He also played an important part in furthering the move of the Children's Hospital from Huntington Avenue to its present site.

I grew to know Dr. Rotch well by studying with him blueprints of the marble mausoleum once known as the Infant's Hospital and now occupied by the School of Public Health. Why Dr. Rotch asked me in the evenings to look at blueprints with him, I never did discover. Perhaps because he did not like being alone in the

* Dr. Burrell was appointed Surgeon General in Massachusetts in 1894 and organized the Bay State Hospital Ship in the Spanish War in 1898. We of the Children's Hospital customarily referred to him as "The General."

top of his house. At any rate, I spent many evenings with him sitting on a high stool looking at blueprints. Though often asked for suggestions, I never made but two. One was that the Milk Formula Room and the Utility Room be separated, and the other was that some provision be made for lights in the Operating Room. Neither suggestion was adopted.

During Dr. Rotch's tenure of office, pediatrics as a specialty was in much the same position as is pediatric surgery today. Many leading physicians considered the care of children a poor excuse for a specialty. Although in the light of present knowledge much of Dr. Rotch's teaching has been abandoned, yet most people would agree that he was an important influence in the promotion of pediatrics, now one of the largest, if not *the* largest specialty of today.

But to return to Huntington Avenue: the House Officers, of whom there were perhaps a half dozen, roomed in the cellar, with only one window in each room, one half of it above the level of the street, the other half below in a well. I do not recall ever hearing any House Officer complain about his quarters. The surgical and orthopedic services shared interns at this stage. Today one might think that this was a poor arrangement, and that certain of the men would have been more interested in orthopedics and less in general surgery, or vice-versa, but again I do not recall any slighting of one service for the benefit of the other.

The division of cases between the surgical and orthopedic departments was very different from what it is now. The surgeons took all fractures and trauma and osteomyelitis and of course all abdominal and chest cases. The orthopedists were kept busy with the treatment of bone tuberculosis, congenital hip diseases, flat feet, club feet, and so forth.

The pathological department might be said to have been non-existent. Postmortem examinations were a rare occurrence. Dr. William F. Whitney used to visit the hospital from time to time for the purpose of making a diagnosis on a surgical specimen. His equipment consisted of a small black bag which contained a microscope, slides, cover glasses, a drinking glass and two needles mounted on wooden handles. The procedure for an examination was as follows: first the drinking glass was half-filled with water, and then a small bit of tissue was dropped in the water. The two needles now came into play to tease the tissue into smaller fragments. Next, one of the small fragments was placed on a slide and examined under the microscope, usually without the aid of stains. The subsequent course of the patient proved the accuracy of Dr. Whitney's diagnosis with surprising frequency. With this crude method, why the diagnosis was ever correct was somewhat mysterious. Later, the colorful Dr. Jake McGrath, sometimes known as the Sherlock Holmes of pathology, occasionally came to do an autopsy in some room temporarily improvised for the purpose.

Now a word about the Episcopal Sisters of St. Margaret and Miss Ida C. Smith who ran the Hospital. Sister Caroline and Sister Susanna were the chief administrators while Sister Amey ran the Training School for Nurses. Miss Smith was head of what was termed the Outdoor Relief Department. She was a most phenomenal person. Her gracious manner, her charming smile, her ability to call every patient by name, plus her tact, always made the patients and their parents feel better even after the doctors had sometimes made them feel worse. The importance of the spirit that this quartet of ladies instilled into the hospital cannot be over-emphasized. In later days, this spirit was greatly appreciated by Drs. John L. Morse, James S. Stone, Kenneth Blackfan and others including Mr. George Meyer who succeeded Miss Smith; it continued to be a major factor in the success and reputation of the hospital.

I believe that many of the Alumni here will always feel a deep debt of gratitude

for what the staff of Children's Hospital taught them. Personally I look back on hours spent in both surgical and medical wards with Dr. Kenneth Blackfan not only as the most enjoyable but also the most profitable hours of my life, and certainly too, it was a great treat to make ward rounds with Dr. Jim Stone and to hear all the children who were well enough to take notice call on him to come and see them first.

The spirit of the Children's Hospital which was so important was not unique, but had been a part of the medical profession for centuries and was well emphasized a hundred years ago by Sir James Paget when he said, "Reputation among the member of one's profession may rightly be sought as a great motive to self-improvement, but the reputation among the public alone can scarcely be sought directly and on purpose without great risk of damage. A full measure of good public repute is certain to come without being sought to all who deserve it, whether for their knowledge, for their carefulness, laborious attention, gentleness or other good qualities, but reputation as measured only or chiefly by money may be obtained by the most ignorant through self-assertion, self-advertisement or mere impudence."

I believe that Mr. Howe, our President, realizes that the biggest hospital in the world is not usually the best, but that the excellence of a hospital is largely dependent on the character and personality of its staff.

The Great Ormond Street Hospital in London was the first hospital dedicated to the special care of sick children, and as such may be thought of as the fore-runner of the many great pediatric institutions today. In the following article, Dr. James L. Gamble, '10, discusses some aspects of the beginning of this institution and relates its connection with the present Children's Hospital here in Boston, founded some 17 years after its London predecessor. It is of interest that although many of the practices of pediatrics have changed since the time Dickens delivered his speech in 1858 in behalf of the Great Ormond Street Hospital, the necessary tradition of fund raising for support of these institutions continues, although perhaps in a somewhat less eloquent vein. In Dr. Gamble's discussion and in the preceding article by Dr. William Ladd, '06, the early history of the present Children's Hospital is described. These remarks were delivered at the Annual Dinner of the Children's Hospital Alumni Club which was held at the Harvard Club on April 19, 1953.

The Hospital for Sick Children Great Ormond Street, London and The Children's Hospital in Boston

JAMES L. GAMBLE, '10

My small experience as a speaker has consisted almost entirely in reporting burette measurements, so that I have the greatest difficulty in finding suitable words for an occasion like this. I can appreciate the plight of the Scotch minister who lost his sermon on the way to the Kirk. He climbed into the pulpit and put his hand in his pocket and found that his sermon was gone. He explained his predicament to the congregation and said, "So this morning I will just have to use the words the Lord puts in my mouth, but this afternoon I'll give you a real good sermon." Lacking the Scotch minister's faith, I had no hope that words would be sent to me. So I was astonished and pleased when my skepticism was rebuked and words *were* sent to me out of the blue in the form of a small pamphlet which quite unexpectedly came into my possession. This pamphlet records a speech by Charles Dickens at a dinner in behalf of the Hospital for Sick Children, February 9, 1858. This was six years after the founding of the hospital at Great Ormond Street. Figure 1 shows you the title page. Here we find Victoria's approval, and a brief statement of the Objects of the Institution:

1) The Medical and Surgical Treatment of Poor Children
2) The Attainment and Diffusion of Knowledge regarding Diseases of Children
3) The Training of Nurses for Children.

I will read you a few excerpts from this speech which Dickens delivered on a somewhat similar occasion 100 years ago in the dawn of community conscience regarding the care of sick children.

He begins by describing, very amusingly, spoiled children, explaining that "I do not mean our own spoiled children, because nobody's own children were ever

SPEECH OF

CHARLES DICKENS, ESQ.,

ON BEHALF OF THE

Hospital for Sick Children,

49, GREAT ORMOND STREET.

PATRON,—HER MAJESTY THE QUEEN.

The Objects of the Institution are—

I.—The Medical and Surgical Treatment of Poor Children.

II.—The Attainment and Diffusion of Knowledge regarding the Diseases of Children.

III.—The Training of Nurses for Children.

London:

PRINTED BY FOLKARD AND SON, DEVONSHIRE STREET, QUEEN SQUARE.

1867.

FIG. 1

spoiled, but I mean the disagreeable children of our particular friends. We know what it is to have them down after dinner and across the perspective of a miscellaneous dessert, to see, as in a black dose darkly, the family doctor looming in the distance. We know what it is when these children won't go to bed and how, when they become fractious, they say aloud they don't like us, and our nose is too long, and why don't we go." After relating further entertaining instances of the behaviour of other peoples' children, he achieves Dickensian contrast by turning abruptly to children spoiled, not by affluence, but by poverty and disease. Here is a passage in which he quite outdoes himself as a master of pathos.

"Some years ago, being in Scotland, I went with one of the most humane members of the humane medical profession, on a morning tour among some of the worst-lodged inhabitants of the old town of Edinburgh. In the closes and wynds of that picturesque place—I am sorry to remind you what fast friends picturesqueness and typhus often are—we saw more poverty and sickness in an hour than many people would believe in a life. Our way lay from one to another of the most wretched dwellings—reeking with horrible odours—shut out from the sky—shut out from the air—mere pits and dens. In a room in one of these foul places, where there was an empty porridge pot on the cold hearth, with a ragged woman and some ragged children crouching on the bare ground near it there lay, in an old egg-box, which the mother had begged from a shop, a little feeble, wasted, wan, sick child. I can see him now, as I have seen him for several years, looking steadily at us. There he lay in his little frail box, which was not at all a bad emblem of the little body from which he was slowly parting,—there he lay quite quiet, quite patient, saying never a word. He seldom cried, the mother said; he seldom complained; 'he lay there seeming to wonder what it was a' aboot.' God knows I thought, as I stood looking at

Fig. 2

him, he had his reasons for wondering—reasons for wondering how it could possibly come to be that he lay there, left alone, feeble and full of pain, when he ought to have been as bright and brisk as the birds that never got near him—reasons for wondering how he came to be left there, a little decrepit old man, pining to death, as if there were no crowds of healthy and happy children playing on the grass under the summer's sun within a stone's throw of him, as if there were no bright, moving sea on the other side of the great hill overhanging the city; as if there were no great clouds rushing over it, as if there were no life, and movement, and vigour anywhere in the world—nothing but stoppage and decay. There he lay looking at us, saying in his silence, more pathetically than I have ever heard anything said by any orator, 'Will you please to tell me what this means, strange man? and if you can give me any good reason why I should be so soon so far advanced upon my way to Him who said that children were to come into His presence, and were not to be forbidden, but who scarcely meant, I think, that they should come by this hard road by

which I am travelling—pray give me that reason, for I seek it very earnestly, and wonder about it very much'; and to my mind he has been wondering about it ever since. Many a poor child, sick and neglected, I have seen since that time in this London; many a poor sick child I have seen most affectionately and kindly tended by poor people, in an unwholesome house and under untoward circumstances, wherein its recovery was quite impossible; but at all such times I have seen my poor little drooping friend in his egg-box, and he has always addressed his dumb speech to me, and I have always found him wondering what it meant, and why, in the name of a gracious God, such things should be!

"Now, ladies and gentlemen, such things need not be, and will not be, if this company, which is a drop of the life-blood of the great compassionate public heart, will only accept the means of rescue and prevention which it is mine to offer. Within a quarter of a mile of this place where I speak, stands a courtly old house, where once, no doubt, blooming children were born, grew up to be men and women, and married, and brought their own blooming children back to patter up the old oak staircase which stood but the other day. In the airy wards, into which the old state drawing-rooms and family bed-chambers of that house are now converted, are such little patients that the attendant nurses look like reclaimed giantesses, and the kind medical practitioner like an amiable Christian ogre.

"On the walls of these rooms are graceful, pleasant, bright childish pictures. At the beds' heads are pictures of the figure which is the universal embodiment of all mercy and compassion,—the figure of Him who was once a child Himself, and a poor one.

"In the printed papers of this same Hospital, you may read with what a generous earnestness the highest and wisest members of the medical profession testify to the great need of it; to the immense difficulty of treating children in the same hospitals with grown-up people, by reason of their different ailments and requirements; to the vast amount of pain that will be assuaged, and of life that will be saved through this Hospital—not only among the poor, observe, but among the prosperous too, by reason of the increased knowledge of children's illnesses, which cannot fail to arise from a more systematic mode of studying them."

Then Dickens comes out openly in the role of fund finder and tells his hearers that his lovely place provides only 30 beds, "a number forlornly and miserably diminutive compared with this vast London."

"This is the pathetic case, which I have to put to you; not only on behalf of the thousands of children who annually die in this great city, but also on behalf of the thousands of children who live half-developed, racked with preventible pain, shorn of their natural capacity for health and enjoyment. If these innocent creatures cannot move you for themselves, how can I possibly hope to move you in their name?"

Now, using lesser language, I will attempt to make a few remarks on my own. Our Children's Hospital was founded as you know in the year 1869, 17 years after the Hospital for Sick Children. Just as at Ormond Street, the first building was an old mansion. (Figure 2). This is a picture of the Rutland Street hospital. The objectives of the hospital were briefly stated

MEDICAL OFFICERS.

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SAMUEL CARTWRIGHT, Esq.,—*Surgeon Dentist.*
JOHN WILLIAMS, Esq., *House Surgeon.*
THE LADY SUPERINTENDENT.

FIG. 3

in the By-Laws in words which were almost identical with those which we read on the title page of Dickens' speech. There is another link between the two hospitals which we find in Figure 3. Here we have the medical Staff of Great Ormond Street,

SISTER SUPERINTENDENTS OF THE HOSPITAL AND OF THE SCHOOL

Upper Left: Sister Maria Margaret, S.S.M., 1889–1895
Upper Right: Sister Caroline Margaret, S.S.M., 1895–1899

SISTER SUPERINTENDENTS OF NURSES AND PRINCIPALS OF THE SCHOOL

[illegible]: Sister Susanna Margaret, S.S.M., 1[illegible]–1926
[illegible]: Sister Mary Margaret, S.S.M., 1926–1943

Fig. 4

at the time of Dickens' speech, composed of doctors and surgical esquires, and in large print, The Lady Superintendent. She was a member of the Sisterhood of St. Margaret, a religious order of the Church of England. In 1870, one year after its founding, the Children's Hospital, through the efforts of Dr. George C. Shattuck, also acquired a Lady Superintendent from this Sisterhood. The Mother Superior of the order brought Sister Teresa safely across the sea to Boston. Two years later two more sisters came over and an affiliated branch of the order of St. Margaret was established in a house on Louisburg Square. The administration of the hospital and the training of nurses was carried on by the Sisters all the way from 1870 to 1917 with, as Dr. Ladd has told you, a splendid effectiveness. (Figure 4).

Then over the next 16 years we continued to have a Lady Superintendent; the very remarkable and much beloved Ida C. Smith who gave 42 years of devoted service to the hospital after graduating from our training school in the class of '91. Dr. Ladd has paid her memory a warm tribute, which it deserves. I can testify to her vigilance as an administrator. I recall having taken on a dilapidated old fellow named John to do the cleaning chores in the laboratory. I told him to get his meals with the hospital orderlies. I knew this was illicit because, except for specified services to the hospital, the Medical School was supposed to sustain the laboratory and its personnel. When my crime was discovered I pointed out to Miss Smith that the routine bacteriological laboratory was using a great many guinea pigs and that I was feeding them, along with our rats and rabbits, out of Medical School funds. The guinea pig colony was large and voracious. Miss Smith knew a bargain when she saw one, so she instantly suggested that if I would continue to feed the guinea pigs she would give John his meals, and she went away very pleased over having got the best of me.

Figure 5 shows the Huntington Avenue hospital which opened its doors in 1882,—and closed them in 1914. In their report for the year 1881 the managers proudly described the new building as "plain but graceful and substantial" and expressed their belief that it "will give satisfaction to all concerned, unless it be in one particular—the cost." The cost of the new hospital, which so much perturbed the

THE CHILDREN'S HOSPITAL, BOSTON.

Fig. 5

managers of those days, was $125,000. It was here that I served my internship in 1912. Such was the humble position of our specialty at that time that six months was all that was required to produce a pediatrician. Recently in answering a questionnaire from the Academy of Pediatrics I was very amused to put down six months as the extent of my training. Also, in contrast to now-a-days, there were only two medical house officers. The Junior looked after the outpatients in the morning and assisted the Senior on the ward in the afternoon. My companions were Bronson Crothers who was my Senior, and then Ed Wyman who became my Junior. The house officers' rooms were in the basement. As you see in the picture, their windows looked up at the sidewalk and I remember that they received large quantities of dust from Huntington Avenue. The uppermost windows in the central part of the building served an important purpose. They provided an excellent view of proceedings in the Red Sox ball park across the way.

Figure 6 is a picture of one of the wards. It was, as you see, much more spacious than our modern wards. There was an open fireplace. It was a most pleasant and gracious room. In the medical ward three or four of the beds were usually occupied by patients with typhoid fever and an occasional polio patient was admitted to the open ward without qualm.

I have taken more than my share of your attention; otherwise I could reminisce a lot more about the old place, especially about the splendid men on the medical, surgical and orthopedic staffs who were giving the development of the care of sick children the large impulsion which has carried the Children's Hospital to its position of high leadership.

Fig. 6

Harvard's New Nobel Laureate

Dr. Fritz Lipmann

Ninth Harvard man to win a Nobel Prize and the third to gain the distinction in the field of medicine, Dr. Fritz Lipmann is best known among medical scientists for developing the concept of a "metabolic dynamo" by which energy-rich phosphate bonds continually supply needed energy for the building process. As an outgrowth of this work came the discovery of coenzyme A—now recognized as a key substance in biosynthesis.

In the Harvard Medical School, Dr. Lipmann is Professor of Biological Chemistry at the Massachusetts General Hospital and Head of the Biochemical Research Laboratory there. He has been working in the research laboratories of the M.G.H. since 1941, and he has held a Harvard appointment since 1944.

Dr. Lipmann was born in Koenigsberg, Germany, on June 12, 1899, received both the M.D. and Ph.D. degrees from the University of Berlin, and subsequently worked in laboratories in Berlin, Heidelberg, at the Rockefeller Institute in New York, in Copenhagen, and at Cornell.

Devoting much of his career to a study of the mechanisms of biosynthesis, Dr. Lipman has been contributing importantly to our understanding of how foodstuffs are utilized in the body, for about thirty years. His first publication was in 1924, and he has published 125 papers and reviews since that time.

His most noteworthy achievements since coming to the Massachusetts General Hospital have been three in number:

(1) He has shown the importance of certain phosphorous-containing organic compounds in providing for the transfer of chemical energy and its utilization in synthetic reactions.

(2) He discovered and isolated the substance acetyl phosphate. This compound provided the missing link needed to understand how sugars are burned in mammalian tissues. It also provided the link between the metabolism of carbohydrates and fats.

(3) He discovered, isolated and identified

the coenzyme responsible for the transfer of the two carbon acetyl group and named it Coenzyme A. This conezyme turned out to be a derivative of one of the B-complex vitamins—pantothenic acid.

Thus, in addition to discovering a new and important coenzyme, he coincidentally discovered the mode of action of a vitamin, in itself no mean achievement.

Each of these three discoveries would of themselves have been of sufficient importance to have merited his consideration for the Nobel Prize. Taken together, over the short space of twelve years, they make Dr. Lipmann a logical and well deserved Nobel Laureate.

Recently Dr. Lipmann has been investigating the mode of action of the thyroid hormone, long recognized as a regulator of energy utilization.

In 1931-32, Dr. Lipmann came to the United States from Germany on a fellowship to work at the Rockefeller Institute for Medical Research under Dr. P. A. Levene. In 1932, he returned to Europe to work as an investigator in the Biological Institute of the Carlsberg Laboratories in Copenhagen, where he remained until he took up permanent residence in the United States in 1939.

He spent 1939-41 in the Department of Biological Chemistry at Cornell University under Professor V. du Vigneaud, and in July, 1941, started his career as Research Chemist at the M.G.H., the Ciba Company offering the initial financial support. Subsequently his investigations have been supported by many others, including the Macy Foundation, the Commonwealth Fund and the Rockefeller Foundation. From a start as a Research Fellow in the Department of Surgery, he has become the Chief of the Biochemical Research Laboratories of the Hospital.

Dr. Lipmann became a research fellow of the Harvard Medical School in 1944. He was promoted to Associate in Biological Chemistry in 1946 and in 1949 he became Professor of Biological Chemistry at the Massachusetts General Hospital.

In 1947, Dr. Lipmann received the honorary degree of M.D. from the University of Marseilles and in June, 1953, the University of Chicago awarded him the honorary degree of Doctor of Science.

His wife is the former Freda M. Hall of Defiance, Ohio, and they have an eight-year-old son, Stephen Hall Lipmann. The Lipmanns live at 100 Revere Street, Boston.

Professor Lipmann is the sixth member of one of Harvard's Faculties to win a Nobel Prize. In addition, three Harvard Alumni have also won Nobel Awards. The Faculty winners have been, besides Professor Lipmann, Professor Theodore W. Richards, Chemistry (1914), for determining the atomic weights of many elements; Professor George R. Minot and Dr. William P. Murphy, Medicine (1934), for the discovery of liver therapy for pernicious anemia; Professor Percy W. Bridgman, Physics (1946), for studies and inventions in high-pressure physics; Professor Edward M. Purcell, Physics (1952), for discoveries in nuclear magnetism. Alumni who have won Nobel awards are Theodore Roosevelt, '80, Peace (1908); T. S. Eliot, '10, Literature (1948); James Batchelder Sumner, '10, Chemistry (1946).

The 1953 Nobel award in medicine was shared by Professor Lipmann and Professor Hans Adolph Krebs of Sheffield, England, who discovered the citric acid cycle.

Edwin Joseph Cohn, B.S., Ph.D.

Dr. Edwin J. Cohn

Edwin J. Cohn, one of Harvard's most eminent professors, died suddenly of a cerebral hemorrhage in his sixty-first year on October 1, 1953, thus bringing to an untimely end an extraordinary career, comparable to those of some of the great natural philosophers of the seventeenth and eighteenth centuries, whose intellectual and spiritual heir he was. His unique combination of talents led him naturally from fundamental investigations upon those molecules "of prime importance" to life—the proteins—to the exploration of methods for satisfactory collaboration in research and development between universities, industry and government, to the creation of a pattern whereby the public might reap the full benefit of his scientific discoveries, and on to the philosophical implications of form in nature, as revealed by the structure of proteins. An extraordinarily gifted and integrated human being, driven forward in his quest for knowledge by an amazing inner energy, he believed implicitly in the unity of all science, and in the necessity for the scientist to follow the facts, wherever their implications might lead, as stated so well in 1687 by Charles Morton in one of Dr. Cohn's favorite quotations,

> "Where New appearance is before the Eyes,
> New Suppositions thereupon arise."

Edwin Cohn was born in New York in 1892 and began his academic training at Andover and then at Amherst College, where he studied from 1910 to 1913. Advised by Jacques Loeb, whom he met through his older brother, Dr. Alfred Cohn, who had already started his long term of distinguished service at the Rockefeller Institute, that the University of Chicago was the best place to prepare for a scientific career, he transferred to that institution and received his B.S. degree in 1914 and his Ph.D. in 1917. During his graduate studies he worked at Harvard with Professor Lawrence Henderson and Professor Theodore Richards, and at Yale with the great protein chemist Professor Thomas B. Osborne. With the coming of war, he worked with Henderson as a first lieutenant in the Sanitary Corps of the U. S. Army on the physical chemistry of breadmaking. Upon his release from this task in 1919, he was appointed one of the

first National Research Council Fellows in Chemistry and went abroad to study with Sörenson in Denmark, Arrhenius in Sweden and Hardy and Barcroft at Cambridge, England.

Thus admirably equipped for a career in protein chemistry, after these contacts with the outstanding men in this field in this country and abroad, he returned to the Harvard Medical School's newly created Department of Physical Chemistry, a laboratory in which he was to spend the remaining years of his life. At first Assistant Professor, then Associate Professor under Lawrence Henderson, he became Professor of Biological Chemistry and Henderson's successor as Head of the Department of Physical Chemistry in 1935. From 1936 to 1949 he served as Chairman of the Division of Medical Sciences of the Faculty of Arts and Sciences and thus had an important influence upon the organization of training for those seeking the Ph.D. degree in the medical sciences. In this capacity he fought vigorously for the unity of science as expressed in a close relationship between the medical science disciplines represented at Longwood Avenue and the natural science disciplines represented in Cambridge. In the post-war period, he felt so strongly about the importance of this unity of the sciences and so concerned, on the one hand, by the tendency to separate the medical sciences from the natural sciences and, on the other, by the trend toward establishment of basic science laboratories within a hospital rather than a university framework that he prepared a "History of Medical Sciences," in which he expressed his point of view with characteristic vigor.

In 1949, Harvard recognized the pioneering nature of Dr. Cohn's work, which had crossed the frontiers of so many different scientific disciplines, and appointed him Higgins University Professor, an honor which transcended for him the many other accolades bestowed upon him in the last decade of his career. "University Professorships" had been established, by vote of the President and Fellows on June 19, 1935, "for men of distinction not definitely attached to any particular department" and were reserved "for men working on the frontiers, and in such a way as to cross the conventional boundaries of the specialties." Dr. Cohn was the first scientist to hold one of these professorships and was enormously pleased by this unique recognition from Harvard's great company of scholars. The Department of Physical Chemistry was administratively detached from the Medical faculty and became known as the "University Laboratory of Physical Chemistry Related to Medicine and Public Health of Harvard University." Although plans for moving the laboratory closer to the natural science departments in Cambridge were under consideration at the time of his death, the University Laboratory is still located in its old quarters at the Medical School. As University Professor, Dr. Cohn also served as Director of the University Laboratory and as Chairman of the Department of Biophysical Chemistry of the Faculty of Arts and Sciences. The University Laboratory (and its predecessor, the Department of Physical Chemistry) has not only made outstanding contributions to our knowledge concerning proteins, but has wielded an even more important influence as a center for the training of the best young men in protein chemistry from many parts of the world. Dr. Cohn has perhaps described this influence better than anyone, when, in a paragraph on the research of Galileo and Vesalius in the sixteenth century, he wrote:

"The organic growth of this period reveals a pattern followed in all subsequent times. The center of the growth is an individual with vision, around whom others aggregate, attracted by leadership and becoming a part of a new tradition. New knowledge is created by new men who build new schools of thought which transcend past knowledge. New techniques and new traditions follow and are disseminated from these focal centers. A single center in any one field and at any one time may

suffice to open a new era in science, as in art. Those who flock to this center and are trained there carry the new insight and the new techniques to the ends of the earth."

Dr. Cohn's important work, his vigorous personality, and his strong convictions about the public responsibilities of a scientist brought him international recognition. He received a series of honorary degrees,[1] was called to an impressive number of lectureships,[2] in each of which he put forward important new ideas, and was a member of numerous scientific societies.[3] The outstanding quality of his work was recognized by many awards,[4] none of which would have pleased him more than the Lasker Group Award in Public Health, given to the University Laboratory late in 1953, shortly after his death.

During the second world war, Dr. Cohn's broad knowledge of protein chemistry, his insight into the fundamental aspects of biological problems, and the remarkable group of men working in and collaborating with his laboratory were inevitably dedicated to the war effort. As a result, he was made responsible investigator for a study of blood derivatives for the Committee on Medical Research under contract with the Office of Scientific Research and Development and served as Honorary Consultant to the Medical Department of the U. S. Navy from 1942 to 1950. As a member of the Subcommittee on Blood Substitutes of the National Research Council during the war, he played an important role in the guidance of the armed services in the development, procurement, and processing of plasma and its derivatives. After the war, he served again as a member of the Committee on Blood and Blood Derivatives of the National Research Council from 1948 to 1951, and his advice was sought by the American Red Cross in the development of its National Blood Program as a member of its advisory committee and as special advisor to General Marshall during his tenure of office as its President. With the inauguration of the extramural grants program of the National Institutes of Health of the U. S. Public Health Service, Dr. Cohn served this agency as a consultant on its first Hematology Study Section from 1946 to 1951. Thus, his contributions to the development of a comprehensive national blood program during the war emergency and in the post-war years were very great, through the scientific and developmental work of his own laboratory, through his relation to the pharmaceutical laboratories producing plasma derivatives, through his conscientious services as an advisor, and through his leadership in the movement to change the handling of blood from an empirical technique to a chemical process under rigid scientific control and based on sound knowledge of the properties of its natural components.

Edwin Cohn's scientific career was unified by a continuing attempt to un-

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[1] M.A. Harvard 1942; D.Sc. Amherst 1944, Harvard 1945, Columbia 1945; M.D. Geneva 1946, Berne 1947.

[2] The Silliman Lectureship at Yale in 1946, the American Swiss Foundation Lectureship in 1947, the Belgian American Educational Foundation Lectureship in 1947, the Julius Stieglitz Memorial Lectureship of the American Chemical Society in 1949, and the De Lamar Lectureship in Public Health at Johns Hopkins in 1951.

[3] The National Academy of Sciences, the American Philosophical Society, the American Academy of Arts and Sciences, the American Chemical Society, the American Society of Biological Chemists, the American Physiological Society, Sigma Xi and the National Academy of Medicine of France, of which he was a corresponding member.

[4] The Alvarenga Prize of the College of Physicians of Philadelphia in 1942, the Passano Award for distinguished service to American medicine in 1945, the John Scott Medal in Philadelphia in 1946, the John Phillips Memorial Medal of the American College of Physicians in 1946, the Medal of Science of the Free University of Brussels in 1947, and the Theodore William Richards Medal of the Northeastern Section of the American Chemical Society in 1948. He was given the Medal for Merit by the U. S. Government in 1948 and was made a Chevalier of the French Legion of Honor in 1952.

derstand the natural properties, and the functions dependent on them, of the proteins, a term derived from the Greek word πρωτεύειν, which he liked to translate as "to occupy the prime position." His initial studies were concerned with the titration curves and solubility characteristics of proteins. As these studies proceeded, he became convinced that, in order to understand the characteristics of such large and complex molecules, it was necessary to know far more about the physical chemistry of the simpler substances of which they are composed. Work along these lines, which went on in the laboratory for over a decade and laid the groundwork for its great contributions to our knowledge of the chemistry of the blood, culminated in the publication in 1939 of the book, "Proteins, Amino Acids, and Peptides" by Cohn and Edsall.

During the late twenties his fundamental knowledge was enlisted, as it was to be again during the war years, in the solution of an important practical problem. Although Minot and Murphy had succeeded in producing remissions of pernicious anemia by feeding liver, the large amounts of unpalatable food which the patient was forced to consume placed an important practical limitation on this form of treatment. Starting with a wrong assumption, that the active principle was a protein (an assumption which was proved partially correct by his subsequent work on the fractionation of liver twenty years later), he was nevertheless able to separate and concentrate the active principle in a relatively small fraction of whole liver extract and thus to make possible the practical treatment of this disease. This work, which never completely satisfied him intellectually, because the difficulties of clinical assay of the potency of his extracts forced its discontinuation before it was completed, led him to formulate principles to which he adhered rigidly in subsequent collaborative work with clinical groups.

In early 1940, as the possibility of war became more and more imminent, Dr. Walter B. Cannon of the Committee on Shock of the National Research Council consulted Dr. Cohn about the preparation of a blood substitute from animal blood, since few people dared to hope that human blood could be collected in adequate quantities to meet the possible global demands of our armed forces. Dr. Cohn immediately mobilized the resources of his laboratory and enlisted the collaboration of other groups in the University to meet this call to action. Bovine plasma, which had been used by Wangensteen in a few patients, was fractionated by methods which were the direct outgrowth of all the previous work of the laboratory. It was quickly shown that the albumin fraction possessed many of the desired properties. However, realizing that the clinical application of bovine albumin would be met with considerable prejudice, even if it should be proven safe, Dr. Cohn, with characteristic vision, undertook a parallel study of the fractionation of human plasma. From these beginnings sprang the remainder of his life work. New therapeutic agents—serum albumin, gamma globulin, fibrinogen and antihemophilic globulin, fibrin foam and film, thrombin, blood typing globulins—were all developed from human blood and produced for the armed forces during the war. Far more important than these products, however, were the new techniques for the purification of proteins from biological sources on a larger scale and with greater purity than ever before, the new concepts which arose as a team of brilliant fundamental scientists addressed themselves to the practical problems which were encountered, and the pattern of team work and collaboration between chemists, medical scientists and clinicians which was created by Dr. Cohn's leadership. As his close friend, Professor George Scatchard, said in the final paragraph of his presentation address for the Richards Medal in 1948,

"Although Dr. Cohn's direct contributions to the physical chemistry of proteins have been of the utmost importance, I am

not sure that his greatest contribution to science has not been demonstrating that the whole can be greater than the sum of its parts when properly correlated, and showing the possibilities of research in diversified applied fields when centered around a group interested in and working on the fundamental underlying principles. First come the insight and the ideas, then the techniques, and finally the applications. Most important are the insight and the ideas."

Before the war ended, Dr. Cohn had already begun to look ahead to the "New Suppositions" which arose as a result of the many leads uncovered by these studies on blood proteins. One of the most fruitful of these was the concept of the specificity of the interactions of certain proteins with small molecules and particularly with metals. This had grown from studies upon the B_1-metal combining globulin (iron-binding protein), which had been crystallized in the laboratory, and from work upon the reaction of serum albumin with mercury, as a consequence of the development of a method for removing the mercurial preservation from surplus dried plasma before its fractionation for the Red Cross. Pursuit of this concept led to the preparation of a whole new series of complex metallic salts of albumin, and to the development of a new system of fractionation by metal buffer reagents with greater potentiality for the separation of labile proteins than the original cold-ethanol-water method. Another important concept which Dr. Cohn emphasized from an early period in the work on blood was the equilibrium which must exist between the blood and the tissues. After the war, this concept was subjected to study through a return to the old problem of the fractionation of liver, but this time with the accumulated wisdom of twenty years in the study of proteins. Shortly before his death, plans were maturing for a similar study of bone marrow.

In 1948, with reactivation of the National Research Council's interest in blood preservation to meet the potential threat of atomic warfare, Dr. Cohn was requested to call a conference to assess the state of knowledge in this field. He threw himself into his task with vigor and organized "The Formed Elements Group" to collaborate with him in a study of the problem. This group of able investigators,[1] each expert in some aspect of the study of blood, met with Dr. Cohn at weekly intervals for nearly two years, and their collaboration resulted in a series of concepts which may ultimately revolutionize the collection and processing of human blood. The conference, held in January 1949 at the Harvard Medical School, was an extraordinarily comprehensive survey of the state of knowledge regarding many aspects of blood preservation and undoubtedly gave a great impetus to studies of this problem. As Dr. Cohn said, the conference indicated that almost every technical routine in use for the collection of blood at that time was injurious to one or another of its important components. Accordingly, new techniques based upon an understanding of the natural properties of its various component parts had to be evolved. Needles, tubing and container were redesigned to avoid eddies and surface reactions initiating the coagulation process, citrate was replaced as an anticoagulant by passage of the blood over a cation exchange resin to remove its calcium, and a heat exchanger was introduced to cool the blood as soon as it left the donor's vein. New types of centrifuges were designed for separation of red cells, white cells and plasma through controlled application of such simple physical principles as govern the sedimentation of eryth-

[1] Throughout this note, the naming of individuals has been avoided, because so many people collaborated in Dr. Cohn's intellectual adventures that injustice would surely be done to someone. Dr. Cohn himself was very careful to see that proper credit was given to the person responsible for a particular idea or discovery, but often it was difficult to know from which member of a group of experts important ideas had come.

rocytes in plasma. In order to accomplish the goal of the first stage of this research—separation of the formed elements and plasma proteins in their natural state so that the conditions governing their stabilization and preservation could be ascertained—the whole process was mechanized, and, with the assistance of various industrial and research engineering groups, the famous "blood machine," technically known as biomechanical equipment, was developed. This proved to be a long and difficult task, but after nearly three years of effort, the first models are now being built for distribution to other investigators and should ultimately prove a great boon not only to blood research, but quite possibly to blood banks as well. Plasma obtained by this method can be fractionated by the new metal-buffer reagents so that all of the labile plasma globulins are separated into the solid state and thus rendered stable for further processing in less than an hour after leaving the donor, during all of which time they have been kept at very low temperatures. The remaining supernatant, known as S.P.P.S. (Stable Plasma Protein Solution), containing albumin and certain stable globulins, is now under study as a plasma derivative for volume replacement in the treatment of shock.

This complete system for separating blood into its components in a very short time after bleeding the donor and under controlled conditions designed to preserve their unique natural properties was clearly visualized by Dr. Cohn within a short time after he attacked the problem of blood preservation with the Formed Elements Group. His own insight into what was possible frequently led him to talk as though what he knew could be accomplished was already a fact, a failing which sometimes resulted in skepticism concerning the whole concept of the mechanization of blood collection and processing by men of less vision and imagination. The engineering development rather than the original research problem required several years of work, and, once he had foreseen and outlined the possibilities, Dr. Cohn's mind was off on its last great quest, the ultimate structural relationship of the amino acids within the protein molecule. His imagination fired by a paper heard at a National Academy of Sciences meeting, Dr. Cohn became convinced that he had the key to the regular patterns whereby the body must synthesize its proteins. The development of this theory of protein structure, upon which the form of all living things must be based, absorbed his creative energies in the last year and a half of his life, and he was planning experiments to test his theoretical formulations at the time of his death.

Such a scientific career would be enough for any man, but Dr. Cohn's vision not only included those "New Suppositions" which were the scientific outcome of his work, but also extended to its social consequences. The great achievements of the war period, springing from the fundamental studies in protein chemistry of the preceding twenty years, involved research and development in the Department of Physical Chemistry, collaboration with other investigators at Harvard and other universities, the creation of close working relationships with those engaged in the production of blood derivatives in the commercial pharmaceutical laboratories, rigid control of processing and careful testing of the finished products in order to insure the maintenance of those high standards, which experience in the Harvard pilot plant had shown was possible. All of this was done with financial support from the agencies of government, although an unrestricted grant from the Rockefeller Foundation to the Department of Physical Chemistry more than once enabled Dr. Cohn to work with a clear conscience toward what he felt was an important development, when those in government, concerned with immediately practical problems, could not see its utility. This complex pattern grew up during the war. As he looked ahead to the post-war period,

Dr. Cohn was anxious to preserve the assets of this war experience in cooperation between universities, industry, and government and was much concerned with maintaining for the benefit of the civilian population those high standards, unique in the biologics field, which had been achieved for the products of plasma fractionation.

The mechanism devised was derived from patents upon the processes of plasma fractionation. These patents, which have been administered in line with Harvard's traditional policy of no royalties for products used for the prevention or treatment of human disease, established the legal right of control in order to insure high standards of quality. Specifications are set and maintained by a self-perpetuating scientific body, the Commission on Plasma Fractionation and Related Processes, through a group of advisory committees composed of experts. This body has had a very important influence upon the standards for biologic products in general, has created an excellent working relationship between those engaged in research in university laboratories and those in production in various commercial and certain state laboratories, and its records have proven to be a uniquely valuable source of information on more than one occasion.

The evolution of a patent policy, which could make possible close collaboration between scientists in universities and in industry, which would be just to the individual investigator, encourage initiative, and, at the same time, protect the public from exploitation, became a matter of great concern to Dr. Cohn and led to a "white paper" on the Patent Policy of the University Laboratory. His continued wrestling with this problem ultimately led to the creation of Protein Foundation, governed by a self-perpetuating Board of Directors, in which his patents were vested for administration in public interest, leaving the Commission on Plasma Fractionation as its technical and advisory body. One of the Directors of Protein Foundation, W. K. Jordan, has written eloquently concerning the significance of these developments, in a minute for the records of the Foundation,

"It is not too much to say that this Foundation sprang from the philosophical perceptiveness and imagination of Edwin Cohn. He was long disturbed by the administrative and public responsibility which inevitably descends on the scientist whose investigations have resulted in discoveries of utility to his fellow men. Neither the scientist nor the university which is supposed to give him sanctuary is, he felt, equipped to deal with the economic, the legal, or the moral problems created by the necessary exploitation of such contributions. The creation of the Commission on Plasma Fractionation and Related Processes, and the Protein Foundation, in which Edwin Cohn's discoveries are vested for the benefit of humanity, was a pioneering effort to resolve a serious problem which has for a generation embarrassed universities and impeded the work of the scholar as he has tried to loose himself from the consequences of one discovery in order to press on to still another. Edwin Cohn found great satisfaction and a kind of peace of mind in this creation which he regarded as one of the most important administrative and scientific advances of his time. He reposed in this body great confidence and extended to each of us who constituted it a warm and a complete friendship. We are in a true sense his heirs and we hold in trust great assets which we have dedicated to the benefit of all mankind. We pause briefly to note the passing of a great spirit, but then, as he would have wished, we move on to explore the frontiers on which he has placed us."

No tribute to Dr. Cohn would be complete which dwelt only on his remarkable creative achievements, without trying to recapture some of the quality of his colorful, forceful personality. Always immaculate in his dress, even to starched collar and waistcoat on the hottest of days, his clothes

bespoke an elegance and perfectionism, which expressed his utter disdain for ill-conceived or careless experiments, for ill-considered advice, or for poorly planned meetings. Anything worth doing at all was worth doing well for a "young man in a hurry," as he described himself. He was an aristocrat, in thought, in manners, and in the high standards he set for himself, as much at home in Europe as in America. Nevertheless, he possessed the politician's uncanny instinct for guessing the true hidden forces behind any complex situation and shared a deeply democratic feeling with our great statesmen like Wilson and Lincoln that the people would usually be wiser than their short-sighted leaders if they really were given the facts. As a scientist committed to the search for truth, wherever it might lead him, he was absolutely uncompromising when it came to the principles upon which his code was based. He was fully aware of the fact that many people considered him difficult because of this, but he would not give an inch when he felt an important principle was at stake. In this he was fearless in the face of criticism but avoided personal animus in bitter controversies over principles, confident that time would prove him right.

To his personal friends, Edwin Cohn was not only extremely loyal but a charming companion, whose witty and cultivated conversation was a source of endless enjoyment. He was a delightful host, and those who were fortunate enough to share the hospitality of his table in the house on Brattle Street came away refreshed in body and mind. Dr. Cohn was married in New York City in 1917, to Marianne Brettauer, who was the mother of his two sons, Edwin and Alfred, and who died after they had been married for thirty-one years. Subsequently he was married again to Mrs. Rebekah Higginson of Boston, whose three children joined the family circle and who carried on the fine traditions of hospitality at the Brattle Street house and at their place in Cohasset during the last years of his life.

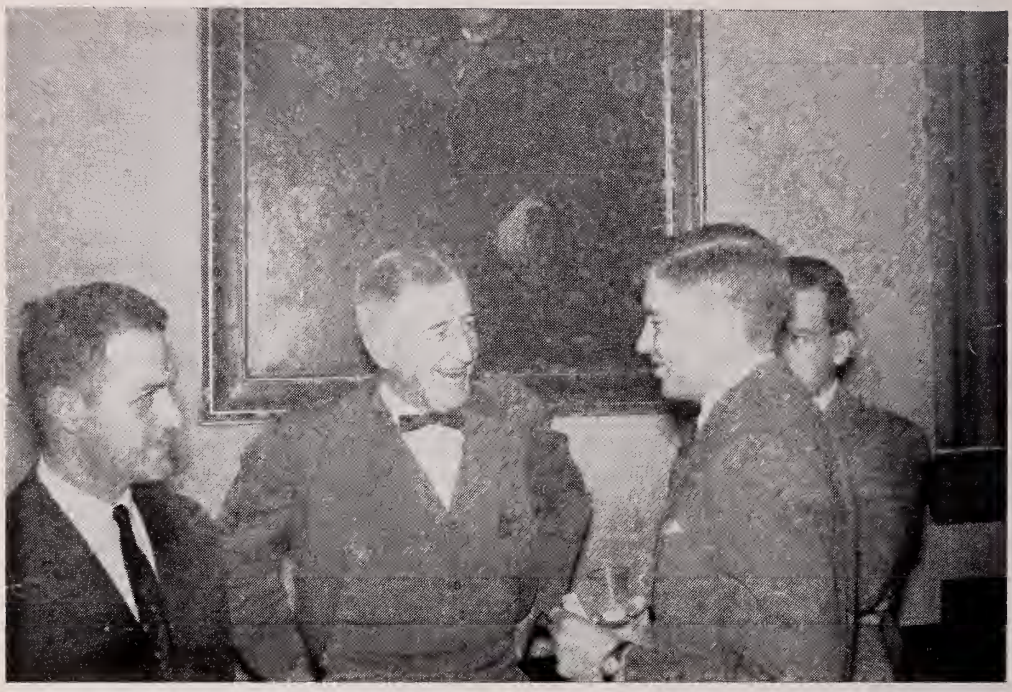
Edwin Cohn believed in living life to the full. Knowing that he had hypertension, he preferred to continue his normal life—confident that when he worked hard and effectively and played his extremely good game of tennis, he was more serene and relaxed than he could ever be if he devoted his energies to worrying and "taking care" of himself. He felt a creative force within himself which could not be denied and often spoke of the keen sense of exhilaration that was his during the post-war years, when, without the terrible pressure of responsibility which he felt during the war, he could see that each new idea emerging from the work of "the kids" in his laboratory was taking its place in the overall picture of protein structure which was beginning to emerge in his mind.

To quote again from W. K. Jordan's tribute,

"Edwin Cohn was a complex human being, a man at once a gifted and most exacting scientist and an imaginative and searching philosopher. He was a remarkable amalgam of the qualities of his own age and those which were more characteristic of the eighteenth century. His manners, his great elegance, his concern with first principles, his scorn for the immediate —all these attributes are those of a century now too little remembered for its contributions to the graces as well as to the wisdom of mankind."

Charles Janeway, M.D.,
Thomas Morgan Rotch Professor of Pediatrics

At the Dean's Christmas Party in the Faculty Room



Dr. Thomas H. Lanman, '16 chats with R. E. Senghas, '54 and W. L. Strickler, '56

Dr. Berry shows to M. A. Thamer, '56 and E. Rubin, '54 Snuff Box and Vaccinating Scarifiers sent to Dr. Benjamin Waterhouse by Dr. Edward Jenner

*How to Get Your Son**

JOHN ROCK, '18

Last year Doctor Kendall Emerson outlined how you can get your son into the Medical School. Well—we are told to hitch our wagons to a star, and there are those who would reach out to get the moon. Could you be satisfied with "How to Get Your Son"?

Half a loaf is better than none. The mere probability that in the present nature of things an alumnus of this, our revered School, has but a 19 per cent chance of enrolling his son here, is no reason why he should reject the joy of at least getting him. The 81 per cent chance that the incarnated yearn in a graduate's heart might be denied pap from this brilliant constellation in the milky way of medicine, is no reason why he, who himself was nourished here, should refuse him a "pappy."

But fatherhood, by considered and warranted choice, not by mere accident, requires much more than consent. Indeed it often requires prodigious effort. But before considering "how" to get your son, we should contemplate further on *whether* to get him; particularly since wilful action in both areas is predicated on identical factors. There is vast ideological, conceptual difference between copulation, which is instinctive, and procreation, which is not. In its essence, sex urge pertains to the individual; reproduction is for the species. Between the two arise the competitive rights and responsibilities of the individual on one side, and of society on the other; just as in politics, we think of the inviolable dignity and the inescapable duty of the individual on one hand, and of the irrevocably delegated but limited prerogatives of the state on the other.

Early in Genesis we read that God said to man, "Be fruitful, multiply, fill the earth, and subdue it." There are important considerations implicit in those four commands: "Be fruitful"; "multiply"; "fill the earth"; "and subdue it"; for, as human life on this planet is constituted, the fulfillment of "be fruitful" does not of itself accomplish multiplication, nor, if we merely multiply, are we sure of filling the earth; and starkly obvious has it been made in too many areas of the globe that irrationally impulsive filling of the earth leads not to its subdual, if this signifies that man is to be its boss, and thus the joyful master of his own fate.

If man could live and function on only air and water, and terrestrial life were eternal, fruitfulness of mates and then of their children would result in multiplication, and geometrically multiplying families inevitably would accomplish the mandate of geographical coverage. Sadly, we have to contend with senility that ends in death; and it is well also to remember that, of orchids, only the flowering variety is epiphytic. Obviously, paucity of food must be conquered first, else only those relatively few who escape starvation will achieve the goal of geriatrics. Maximal cultivation of the earth is a necessary antecedent to its filling.

What is meant by the biblical injunction to subdue the earth? I take it that man is adjured eventually to know all earthly forces and to invent means of safe and

* Presented by Dr. Rock at Alumni Day Exercises, May, 1953.

comfortable adjustment to those which he cannot dominate. It is clear, only permanent frustration will come if he tries to fill the earth before ably utilizing those forces concerned with the production of food.

So that he can be fruitful, man is equipped with a common mating instinct, the compulsive urge to copulate. If physiologically normal males and females indulge in normal sexuality, without regard for the ovulatory calendar, they will be fruitful. But to multiply, instead of merely to add, it is necessary in the nature of man that the fruit hang on the tree for, say, twelve to sixteen years—life is particularly hazardous during this period. To protect himself from other equally rapacious animals physically better equipped than he for offense and defense, man has his additional and peculiar endowment, reason. For good function, reason requires knowledge, and that biblical apple is digested very slowly. To give it time, we have the family which necessarily evolves from the very nature of sexuality in Homo, and clearly man must stop multiplying beyond the limit of family welfare. He must restrain his fruitfulness within the limits of his ability to "subdue" earthly forces to the extent that they will support and protect his family. Thus, in one sense, it would seem that in the sequence of the commandments, "the last shall be first and the first, last."

In most human beings throughout the world, the sex instinct is far stronger than is fear, from which must come any sense of the reasonableness to most men and women of continence. Hence the fortitude required for prolonged practice of this sometimes estimable virtue is ordinarily absent; and, at least temporarily, some less objectionable means of limiting man's incidental fruitfulness must be found. Until knowledge and subjugation of pertinent natural forces bring food enough to warrant filling the earth, there is painful need of insight into all the factors of reproduction, for only from consequential control over these, will come the manifestly required limitation of fruitfulness.

Now what has all this to do with the assigned subject of my discourse, which pertains not to the suppression, but to the induction of fertility? Only this: that insight into the same factors of reproduction and consequential control of them are required to enable him who does not incidentally get a son, wilfully to beget one.

To achieve this, to insure the welfare of our species, indeed eventually to fulfill the Genesiac commands, it is clear that in the future we must spend much more of our money and mentality than we have in the past toward increasing our knowledge of the manifold anatomic and physiologic details of the reproductive process. Only then can we dominate this function. Do you realize that, like the poultry-man with his hen, the gynecotokologist as yet cannot know that a given woman ovulates unless in one way or another she shows him the egg? Every other current indication of ovulation rests on a common and possibly unwarranted assumption that recognizably effective amounts of progesterone are produced only if the ovum escapes from the follicle. *Mittelschmerz* and *ovulation bleeding* are strongly suggestive of antecedent, intercurrent or imminent ovulation. They are not definitive.

Furthermore, although the shepherd may make his ewes ovulate, and the laboratory technician induce her rats and rabbits to do likewise, we must make the humiliating admission that the woman who does not spontaneously ovulate is still impregnable. If surgery or mooted x-ray is followed by ovulation, it is probably because removal of an inhibiting factor merely permits the woman to ovulate, for we cannot force her to do so. This is largely because we have only glimmering cognizance of the factors of ovular maturation and of follicular rupture.

Einstein is said to have characterized the Divine Architect as "subtle but never mischievous"; yet the bitch and many other animals come equipped with built-in

catch-basins for batches of eggs, which are easily emptied thence only into the oviducts, whereas the woman's solitary ovum is either squirted or floated into the broad pelvic cavity. Although we know it is normally rescued by the near-by fimbrial coast-guard, we can but imagine the staff organization of this tactical unit, and the command-means and -methods which accomplish its functional mobilization.

The massed eggs of at least some frogs are presented directly to the closely attendant male, who then carefully places on them his fertilizing complement; but the lone gamete of woman in the comparatively huge chamber of the ampulla must await what we yet think is but a chance encounter with one or another of a comparatively few freely roving sperm. Without known chart or compass, these reach what, in relation to their size, is an amazingly remote and cavernous rendezvous. Trifling is our knowledge of their means of locomotion, but *complete* is our ignorance of how they are sustained during their journey. Thus they continue as masters, or subjects, of their own fate.

As the list of recognized vitamins progresses into confounding numerical subdivisions, and new "-ones" join the known older hormones, so also enzymes, coenzymes and systems of enzymes accumulate in bewildering profusion to permeate biological concepts. Is it possible that by showing or "anti"-ing one or another "-ase" the encountering spermatozoon wins or loses access to the vitelline membrane? Through the possibly faulty sieve of the venerated periodical called "Science" has precipitated the probably faulty suggestion that a derivative from the lowly orange peel will by some such enzymatic interplay stop the sperm in its tracks. If we could be more intimately acquainted with the enzyme, hyaluronidase, respectably postulated as functioning among the human granulosal cells, then perhaps by augmenting its possible action, we could

The Dean's Christmas Card

The two-color version of the Medical School shield appearing on the cover of this BULLETIN is perhaps a poor contrast to the splendid four-color reproduction which appeared with explanatory text as the Dean's Christmas card. This Christmas greeting apparently caught the eye of many Alumni, as there have been inquiries concerning the possibility that this be reproduced in a size suitable for framing. In view of this, the Alumni Association looked into the matter and learned that this print could be reproduced in a size 11″ by 15″ with the heraldic explanation printed on a similar stock so that the print and the text could be framed as a pair of companion pieces.

Preliminary investigation indicates that both the print and accompanying description could be made up at an approximate cost of $5.00 for the two. If there is enough interest, the initial number printed might be increased, thus reducing costs. The Association would welcome a note from any Alumnus who believes that he would like to obtain an enlarged reproduction of this Christmas card. It has been suggested that the seal and text might excellently serve as framed supplements to the Verner etching which is so well known.

facilitate spermatozoal attack on the vitelline membrane of the enclosed egg and insure our fecundity.

It has long been airily assumed that the spermatozoon breached this last ovular barrier by virtue of vigorous tail-thrashing which pushed the knife-like terminus of its acrosome into the vitellus. Now, it is thought possible, if not, indeed, even likely, from Tyler's extension of Loeb's pioneering work with an echinoderm, that still other sex-characteristic enzymes either cooperate to permit fusion of gametes, or conflict, to prevent it. It were foolish to deny that some day it might be possible to control in humans such a complicated mechanism; but first, it must be discovered. Then from sea-urchins, we would see urchins come as voluntary objectives and not as mere by-products of coitus. Vast work and wealth must be expended first to substantiate and then to solve these enzymatic riddles, and subsequently even more research and riches to find means of applying such solutions to human use.

Suppose, for the moment, as so often it is taken for granted, that the ovum, veiled or not by its cumulus, has encountered a spermatozoon completely accoutered in whatever enzymes, antigens, or complements may be required for access to the vitellus itself. Zoology formerly dictated that, having gotten its head inside, the well-bred mammalian sperm would leave its single tail outside. Recently, through the phase microscope, Austin and Smiles in England, and Blandau and Odor in this country have seen that some muridean mites bring their whole long tails into the vitelline chamber. It is not surprising that only this year Shettles reported that human spermatozoa do likewise, since our own Hans Zinsser has already correlated mice and men. Furthermore, by use of the electron microscope, Schnall has shown that not only one tail is brought to the nuptials, but a whole fascicle of them, intricately and beautifully encircled with mitochondria which may also contribute to consummation.

Time forbids entry into the tortuous obscurities of the seminiferous tubules in my assigned search for that son. Let us then presume zygosis and consequent cleavage. From the new epochal epigenetics of Hertig and Heuser, which I figure has cost no more than $100,000, we learn that the first four days of this hypothetical child of ours would be spent in the oviduct, quite as is the case with offspring of several other mammals. Here the two-cell embryo, while traversing the tasselled trabeculae of the tube, turns into the multicellular anglicized mulberry, which, when five days old, should find itself in the welcoming womb of its mother. Promptly it forms a blastocyst.

Differentiation during the ensuing twenty-four hours equips the dynamic little cyst with a vestment of phagocytic syncytium. This trophoblast, as the name implies, *en route* nourishes itself and its cellular associates on intervening endometrial tissue until it reaches and breaches a maternal vascular wall. Then is nidation of our son, or daughter, accomplished. Which shall it be? Or does it matter, now that our Medical School has succumbed to the sometimes sadly indiscrete extension of feminism?

If we are to adopt specificity in my assigned subject, it might be seemly now, in deference to the Program Committee, to consider whether *he* or *she* shall be imbedded.

A few pre-Victorians, in frustrated desperation, revived the Hippocratic and Aristotelian tradition that males derived from gametes of right-sided gonads, and females appropriately from those of the distaff side. Some (possibly misanthropic) cogitators proposed a reverse order: that males formed on the left, and females on the right. Jointure of contralateral germ cells might conceivably result in what the "unmelancholy Dane" tells us are now, in Denmark, called "convertibles."

Phases of the moon have been implicated, as have seasons of the year, wars and epidemics, as well as relative "corporeal

vigor" of parents. Indeed, mythology, both ancient and current, has many answers; but they remain mythical.

Since we are neither birds nor insects, let us admit that our son will be *determined* when a spermatozoon with the Y-chromosome closes the vitelline door to all others. Is it possible that in its race for the ovum, either the X-bearing *or* the Y-bearing sperm finds differential advantage in the secretions of the reproductive tract that may perhaps change during the ovulation phase? Or will one or the other sperm variant find conjugation easier or more durable with a fresh egg, or with one about to addle? Is it conceivable that age of testes affects maintenance of the theoretical 1:1 ratio of X- and Y-bearing spermatozoa?

Two investigators at Duke University, Hart and Moody, by scientifically controlled experimentation, showed that among their rats copulation only late in the ovulation phase increased the incidence of males by percentages varying from 49 to 155 over that occurring in random matings. Insemination shortly before or at the onset of the ovulatory period resulted in a preponderance of females. Parenthetically, it is of interest that Hart is said to have found this time relationship to be reversed in hamsters.

Hart and Moody's is not the only respectable challenge to the traditional assumption of pure chance. By applying the mysterious methods of statistical analysis to the birth record of the United States for the years 1947, '48 and '49, Novitski finds that older fathers have proportionately fewer sons than do men twenty years younger. The mother's age, he reports, is immaterial. It would seem fortunate, therefore, provided, of course, we feed them enough, that more than 25 per cent of our students are already married.

The answer to the question posed, then, is simple: men should marry and be enabled to propagate while young. Those who resemble rats may increase—perhaps by 50, perhaps by 150 per cent—their chances of having a son, instead of a daughter, by mating only late in the ovulation phase. Since the human egg is susceptible to fertilization for doubtless not more than twelve hours after actual ovulation, this will not put too great a strain on their timepieces. Of course, those who resemble hamsters will, on the other hand, wish to mate sooner.

All that would seem necessary then is for us to evolve an accurate indication of ovulation. If I may hazard a guess, I would suppose that, barring favorable and unfavorable accidents, this would require not more than about $1,000,000 a year for about five years. In the meantime, as in the immeasurable past, it would seem advisable for him who wants a son to have intercourse at least every forty-eight hours, from the sixteenth to the twelfth day inclusive before the next menstrual period, and take his ordinary 50:50 chance of begetting one. I might add of course that we still await some way of telling just when the anticipated menstruation will start.

I am sorry I can give no more satisfactory answer to the question posed in my assigned subject. Furthermore, with sad humility, I must admit I don't even know of anyone else who can give one. This does not imply that I sacrilegiously doubt (indeed I reverently believe) that the omniscient, beneficent, omnipotent God who made man can and will permit him eventually to know the answer and to apply a practicable solution to the problem.

I do not believe, however, that this will involve any such artificiality as supersonic vibratory separation of X- from Y-bearing sperm in a test tube. No. The method will lie in control of the built-in biochemical nature of man or woman. However complete is the previously mentioned ideological, conceptual dichotomy in reproductive physiology with one component, *copulation,* pertaining to the welfare of the individual, and the other, *procreation,* pertaining wholly to the welfare of the species, I am serenely confident that there will happily be no change in the old-fashioned requirement of the former for the latter.*

*The pertinent bibliography is filed with a reprint in the Harvard Medical School Library.

Regional Activities

The widespread and receptive response of the Harvard Medical School Alumni to the program of annual giving established two years ago was clear evidence that Harvard's Alumni had a lasting interest and faith in their School. Correspondence accompanying contributions or letters resulting from occasional articles in the BULLETIN showed that Alumni away from the School were eager to know what was going on in the vicinity of 25 Shattuck Street. Prompted by these inquiries and this continuing interest, the Alumni Association embarked on a long-range program to have informal regional gatherings of Alumni in various parts of the country. The first step to make this operation work was to enlist the support of the Faculty. Many of these doctors are frequently traveling to specific medical meetings in all corners of the country. The task was to assemble their itineraries and then proceed to coordinate these with local Alumni who would set up informal meetings and either luncheons or dinners. At these regional get-togethers, the Alumni would then get a chance to hear an informal report about the Medical School, its problems, its new courses, and they in turn would have the opportunity to ask questions about various phases of the School.

As a formalized program of telling the story about Harvard, these regional activities are just beginning. Response has been enthusiastic and immediate, tho' in some cases the number of persons has been relatively small. But both the Faculty speakers who have enthusiastically volunteered to meet with the Alumni and the Alumni themselves have reported that this program is well worth pursuing, and should continue and grow over the years. For the information of all interested, the BULLETIN is going to periodically run a column entitled "Regional Activities" reporting briefly on the meetings, speakers and audiences in various parts of the country.

DR. ARTHUR HERTIG

GRAND RAPIDS

Dr. Arthur Hertig, '30, in Grand Rapids for the State Medical Meeting, spoke at an informal meeting at the Hotel Pantlind to the Alumni in Grand Rapids, on September 23, 1953. Dr. Luney V. Ragsdale, '24, organized the meeting.

ROCKY MOUNTAIN

At an informal cocktail party arranged by Dr. Ira Dixson, '28, Dr. Howard Root, '19, spoke to the Harvard Medical School Alumni of the Denver area at the University Club on October 2, 1953. Dr. Root was on a speaking trip for the Colorado State Medical Society.

Dr. Ira Dixson, '28, reports as follows about the Sixth Annual Harvard Lecture given in Denver on October 30:

" 'Diabetes Today and Tomorrow' was the subject of the Sixth Annual Harvard Lecture duly delivered as scheduled at five in the afternoon of Friday, October 30,

1953, in the Sabin Auditorium of the University of Colorado Medical Center.

"It was given by Howard Root, '19—and very ably, too. The title had been selected months previously by Elliott P. Joslin, '95, since he had originally accepted the invitation to be the Harvard Lecturer on this occasion. However, Dr. Joslin's antics on the eve of this event necessitated the pinch-hitting performance by his associate, Dr. Root.

"For Elliott Joslin chose this time to remind us all of his youth. Well into his 85th year, he lost his appendix for good and just cause.

"Physicians are by training supposed competent to cope with emergent situations. Dr. Joslin was. He even made his own diagnosis and announced it upon admission to the hospital so that lesser fry would not be fussed (nor would he) by 'the history and physical examination' and other tiresome things preliminary to the surgical procedure. His diagnostic acumen was again confirmed by a white count of 18,000 (with a doubtfully legal platoon shift to the left) but more impressively by the surgeon's successful removal of this vestigial trouble-maker and surgical purse support in all its opulent purulence. (NOTE: The patient reminds us that he once assisted Dr. Reginald H. Fitz, who wrote the memorable paper on appendicitis, at the Massachusetts General Hospital.)

"This antecedent event provided Howard Root with nice material for a prologue to his Lecture. He utilized it with telling effect. The audience was first oriented as to detail when photostats of Dr. Joslin's temperature chart were circulated. One could conveniently check on output, intake, antibiotics, et cetera. Thorough as usual, he followed this by an unexpected maneuver which regaled the assemblage, i.e., he produced and passed around Dr. Joslin's appendix pickled in a vial. So some of Dr. Joslin did get to Denver for the occasion after all!

"Seriously, though, we are grateful for the happy outcome of his hospitalization and his ability soon thereafter to return to his work. At the same time we are very sorry that he could not be with us.

"Plans are already in formulation for the Seventh Annual Harvard Lecture. We are fortunate in having secured an acceptance to our invitation from Paul D. White, '11. He has chosen for his title 'Coronary Heart Disease.' And he will be with us on Friday and Saturday, November 12 and 13, 1954, for the usual triad of Lecture, Alumni Dinner and Clinic that have become the standard pattern of events surrounding the visit of our Lecturer to us.

"If any change is necessary in our plans for next autumn, notice will appear in the June number of the BULLETIN.

"I wonder if Paul White still has his appendix? It might be prudent discretely to inquire."

BIRMINGHAM

Dr. Root, who was in Birmingham, Alabama to speak to the State Medical Society on "Retinitis and Diabetes", met with six Harvard Medical School men at a dinner at the Seale-Harris Clinic on October 5, 1953. The gathering was arranged by Dr. B. Hughes Kennedy, Jr., '21.

NEW YORK

Professor Robert Albion of Harvard University spoke on "American Seapower and World Affairs" at the November 5 meeting of the Harvard Medical Society of New York. This group is composed of Alumni in the New York-New Jersey-Connecticut area and meets twice a year. Anyone interested in becoming a member should contact Kenneth W. Thompson, '29, at 20 Main Street, Orange, New Jersey.

MISSOURI

A meeting of the Alumni in the St. Louis area, arranged by Dr. Robert Glaser, '43B, was held on December 3 at the Hotel Jefferson, St. Louis. After an informal dinner, Dr. Howard Root, who was attending an interim session of the

A.M.A. to run a series of talks and clinics, gave a first-hand report from Shattuck Street.

ST. PAUL-MINNEAPOLIS

On January 20, 1954, Dr. J. Englebert Dunphy spoke at an informal meeting in St. Paul. Dr. Dunphy was in Minnesota to speak at the St. Paul Surgical Society on "Management of Severe Upper Gastro-Intestinal Hemorrhage."

CHICAGO

The Alumni in the Chicago area met with Dr. Arthur Hertig, in Chicago attending the Chicago Gynecological Society meeting, at dinner on Thursday, October 15, at the Western Society of Engineers. This was the first local Alumni gathering in the Windy City, and the 23 members who were present enjoyed cocktails and dinner and an informative talk by Dr. Hertig on some of the problems of the Medical School. Dr. Oglesby Paul, '42, who arranged the meeting, reports, "The value of an annual meeting of this type was apparent to all, and the occasion was a happy one not only in showing the Alumni that Harvard was still interested in them, but also in giving an opportunity for them to find out first-hand about the School. It was also pleasant to get a chance to meet other Alumni, many of whom had never seen each other before. It is planned to repeat next year with a similar dinner."

FUTURE MEETINGS

MILWAUKEE

Dr. Mark Altschule, '32, will speak to Alumni in the Milwaukee area on February 16, 1954. Dr. Arthur A. Holbrook, '32, is making the arrangements. Dr. Altschule will be in Milwaukee to address the Milwaukee Academy of Medicine.

BIRMINGHAM

Dr. J. Englebert Dunphy, '33, will meet with Alumni in Birmingham on March 7, 1954. He will be in that city to speak at the Southeastern Surgical Congress on "Treatment of Acute Massive Gastro-Intestinal Hemorrhage." Dr. B. Hughes Kennedy is in charge of arrangements for the Alumni gathering.

Chicago Alumni pose at their October meeting

Honors

Dr. Frank B. Berry (right) chats with Dr. John Homans, '03

Dr. Frank B. Berry, '17, has recently accepted the position of Assistant Secretary of Defense (Health and Medicine) under Mr. Charles Wilson, Secretary of Defense. Dr. Berry is moving to Washington, where he will bring to Secretary Wilson's Department his wide knowledge and experience as an outstanding surgeon. Also of great service will be the knowledge of military surgery that is his as a result of loyal and devoted service to the Army in the years immediately preceding, during and after World War II. We offer congratulations and best wishes to our last year's President of the Harvard Medical Alumni Association.

In the fall of 1953, **James Greenleaf Simmons,** '23, of Fitchburg, was named Massachusetts General Practitioner of the Year by the Massachusetts Medical Society. In nominating Dr. Simmons for the state honor, Dr. F. Richard Pierce, '34, said, "In a period of over 28 years of general practice in Fitchburg, Dr. Simmons has distinguished himself as a conscientious and capable physician of the highest ethical standards. His sincere devotion to his patients and to the profession has enabled him to attain wide recognition among his colleagues and the general public."

Dr. Simmons is a member of the American Medical Association, a director of Blue Shield, a member of the New England Obstetrical and Gynecological Society, and the World Medical Association. He is a councilor of the Massachusetts Medical Society, and is a member of that society's committee on state legislation.

On November 4th the 1953 Alvarenga Prize of the College of Physicians of Philadelphia was awarded to **Dr. Francis D. Moore,** Moseley Professor of Surgery and Surgeon-in-Chief at the Peter Bent Brigham Hospital. The prize was awarded to Dr. Moore because of his "contributions to our understanding of changes in body metabolism following surgery." On this occasion Dr. Moore delivered a lecture at the College, describing certain of the studies carried out in the Surgical Research Laboratories at the Brigham and at the School. Much of this work has been done by the technique of isotope dilution, whereby the total amount of water and electrolyte in the body may be measured. The title of the lecture was "Isotope Dilution. A Theory; A Method; A Pathway to New Horizons."

The Alvarenga Prize is awarded annually by the College of Physicians of Philadelphia. The prize was provided by the will of Dr. Pedro Alvarenga, a Brazilian-born Portuguese physician who during a career in Lisbon made many contributions to clinical science in the mid-19th century. On his death in 1883 he left his fortune to many humanitarian and scientific institutions, and he founded several prize awards. There is an Alvarenga Prize in Philadelphia, another in London, one in South America and another in Germany. The American Alvarenga Prize has been awarded annually for 63 years, since 1890. Recent Harvard recipients have been the late Professor E. J. Cohn, who received the award in 1942, and Professor George W. Thorn, who received the prize in 1951.

Dr. Francis D. Moore

Book Reviews

Editor's note:
This book review was submitted by Dr. Fitz shortly before his death, and represents the last of his many literary contributions to the Bulletin.

Henry Bryant, M.D., 1820-1867. A Biography. Compiled by his son, William Sohier Bryant, M.D. Pp. 273 with 13 illustrations. 1952. Craftsman Press, New York.

Dr. Henry Bryant graduated from Harvard College in 1840 and from the Medical School in 1843. He was a gay, popular young man, endowed with a quick, intelligent mind and winning manners. In college, he was by no means a leading scholar; indeed, President Quincy felt obliged to write his father at the end of Henry's sophomore year, "I regret to be obliged by official duty to state to you that the attention of your son to his studies has been during the last term in the Latin department so little satisfactory to his instructors that he has been ordered by the Faculty *to study during the vacation all the Latin of the last term,* and he will be examined on his return. His standing is not such as you have a right to expect. His fault is carelessness or indifference." He managed, thereafter, to improve his standing in the eyes of his professors and to obtain his A.B. degree in 1840; in the fall of that year he enrolled in the Medical School. One imagines him as a cheerful and debonair medical student and a popular member of the Boylston Medical Society.

The Faculty Record for 1843 states; "At Statute Meetings held on the 14th August and on the 16th for the Private and Public Examination of Candidates for the Medical Degree, Henry Bryant was examined, approved and recommended to the Pres't and Fellows of the University for said Degree." Commencement Day fell a week later, on August 23rd; Henry, on this occasion, must have been a handsome, well-turned-out

young man, not entirely unconscious of the fact that also he was a B.B.B.—A Bryant of Beacon Street, Boston—as he became officially stamped a Harvard M.D.

Instead of becoming a House Pupil at the M.G.H. he went to Paris for further medical training. His letters, written to his family during the next three years, are full of interest. They give a lively picture of all that he did—his studies, the balls, theatres and dinners that he went to, the friends and classmates making the grand European tour who looked him up as they came through Paris, and even the discomforts of an attack of what must have been appendicitis which he thought was probably induced by taking cold after a warm bath and which, not responding to what he termed a pretty good dose of castor oil, eventually cured itself.

He returned to Boston in the fall of 1846, styling himself "Late Extern at the Hospital Beaujour, Paris." One of the first things he did was to organize with Dr. Henry J. Bigelow—also a young Boston doctor with Parisian training—the Charitable Institute for Outdoor Patients. This venture started the first free surgical dispensary in Boston and produced no small amount of professional jealousy and opposition.

In 1847, he won a Boylston Prize for his essay, "The Radical Cure of Inguinal Hernia." He never became a serious practitioner, however, spending his time, as befitted a B.B.B., in happy living, raising a family, and indulging in his favorite avocation of bird-collecting through which eventually he became a distinguished ornithologist.

One of the most interesting parts of his biography deals with his military experience between 1861-1863. When the Civil War broke out he volunteered immediately and was appointed Regimental Surgeon of the 20th Massachusetts Regiment. Presently he was promoted to Brigade Surgeon, later to Chief Surgeon of Division and Medical Director, and finally he was made Surgeon in charge of two General Hospitals in Washington. He draws a graphic picture of the trials and tribulations of a regimental surgeon who was older than most of the officers and men with whom he dealt, his admiration of bravery as he saw it in the field, his own stubborn character, and his disrespect for Army red tape.

Ill health compelled him to resign his military duties in 1863. He died in 1867.

The book is largely made up of his own letters. They reveal Dr. Bryant's character and charm, and also why, to people who did not know him well, he may have seemed eccentric and difficult to deal with. In brief, the letters describe vividly the life of a young Bostonian with positive ideas who graduated from the Medical School shortly before the discovery of ether; to have them available in printed form makes them a valuable addition to the School's recorded history.

Reginald Fitz, '09

Footnote: The compiler of this biography graduated from the School in 1888 and has dedicated his book, "In grateful tribute to a father whom I never knew and remember seeing in 1865 on two brief occasions only."

Plastic Surgery at the New York Hospital One Hundred Years Ago. With Biographical Notes on Gurdon Buck by Herbert Conway, M.D. and Richard B. Stark, M.D. 110 pages, with 19 figures. Price: $5.00. Paul B. Hoeber, Inc., New York, 1953.

This concise and enjoyable book recreates the atmosphere of the surgical wards of the New York Hospital a century ago as a setting for the life and works of Dr. Gurdon Buck. Descriptions and photographs of the hospital and its wards, reports on the medical problems of that era, anecdotes of Revolutionary Days and of the political problems of the area vividly yet unobtrusively background the variety of Dr. Buck's surgical achievements.

> His contributions to surgery ranged from an anatomical description of a fascial layer of the genito-urinary tract to a utilization of traction as a means of treating fractures of the femur; both of these discoveries bear his name. Other surgical innovations included excision of the knee joint . . . successful ligation of the . . . common carotid artery, . . . and he was first in this country [to utilize] laryngeal fissure.

Plastic surgery attracted his attention at the time of the Civil War when the New York Hospital cared for many of the casualties. His publication "Contributions to Reparative Surgery" in 1876 lays down sound surgical principles and illustrates with case histories and sketches their satisfactory applications. In addition to traumatic defects he treated many congenital anomalies, including hare lip and hairy nevi, but reconstruction of the face was his special forte. Lipswitch flaps, forehead flaps, and intra-oral prostheses are among the technical methods he described.

The authors, Dr. Conway and Dr. Stark, who today guide the Plastic Surgical Service at the New York Hospital, are thus part of a worthy surgical tradition. By re-creating in so lively a way the times and lives of those productive decades they have produced an informative and entertaining book.

Joseph E. Murray, '43B.

Harvard Medical Alumni Fund

ANNUAL GIVING—JULY 1, 1953—JUNE 30, 1954

PROGRESS REPORT

JULY 1, 1953—DECEMBER 1, 1953

Class	Agent	Living Members	Givers	Percent Participation	Amount
1881-1900		160	28	17.5	$333.00
1901	Horace Binney	34	11	32.4	285.00
1902	George W. Winchester	46	5	10.9	52.00
1903	John Homans	43	11	25.6	360.00
1904	J. Dellinger Barney	53	10	18.9	210.00
1905	Nathaniel W. Faxon	24	8	33.3	130.00
1906	Horace P. Stevens	36	12	33.3	195.00
1907	James B. Ayer	31	2	6.5	60.00
1908	George G. Smith	31	8	25.8	215.00
1909	F. Gorham Brigham	27	3	11.1	118.00
1910	Alex M. Burgess	41	4	9.8	50.00
1911	J. Howard Means*	55	6	10.9	430.00
1912	Francis M. Rackemann	41	9	22.0	235.00
1913	George P. Denny	44	9	20.5	380.00
1914	W. Richard Ohler*	51			
1915	Arlie V. Bock	58	4	6.9	130.00
1916	Thomas R. Goethals*	49	8	16.3	530.00
1917	Leroy E. Parkins	50	2	4.0	30.00
1918	John Rock	62	1	1.6	110.00
1919	Joseph Garland*	75	18	24.0	580.00
1920	Charles C. Lund	74	1	1.4	25.00
1921	William B. Castle*	82	8	9.8	580.00
1922	G. Colket Caner	89	17	19.1	935.00
1923	Robert Goodale	103	15	14.6	400.00
1924	George C. Prather	113	24	21.2	1037.00
1925	Robert S. Palmer*	103	4	3.9	180.00
1926	G. Kenneth Mallory*	117	12	10.3	610.00
1927	Charles J. E. Kickham	121	3	2.5	127.00
1928	Myles Baker*	115	1	.9	50.00
1929	Herbert E. Hedberg	120	20	16.7	2215.00
1930	Alfred O. Ludwig	131	16	12.2	1285.00
1931	John A. Abbott Charles H. Bradford	124	2	1.6	45.00
1932	Carl W. Walter	125	8	6.4	796.00
1933	J. Englebert Dunphy*	123	5	4.1	265.00
1934	Richard Warren	128	31	24.2	2370.00
1935	George P. Whitelaw*	129	11	8.5	585.00
1936	Howard Ulfelder	130	37	28.5	1715.00
1937	Joseph R. Frothingham*	139	40	28.8	1353.00
1938	Irad B. Hardy, Jr.*	130	2	1.5	125.00

Class	Agent	Living Members	Givers	Percent Participation	Amount
1939	Daniel S. Ellis*	128	25	19.5	595.00
1940	W. Benjamin Bacon*	134	40	29.9	2585.00
1941	Curtis Prout*	131	22	16.8	1015.00
1942	Oglesby Paul*	128	37	28.9	577.00
1943A	James H. Jackson*	141	3	2.1	60.00
1943B	John Brooks*	130	38	29.2	723.00
1944	Robert W. Taylor, Jr.	141	24	17.0	353.00
1945	Robert S. Shaw*	138	27	19.6	333.00
1946	Milton W. Hamolsky	143	37	25.9	303.00
1947	Hermes C. Grillo	127	11	8.7	80.00
1948	Curtland C. Brown	137	24	17.5	157.00
1949	John W. Keller	141	20	14.2	168.00
1950	Henry D. Minot, Jr.	131	4	3.1	36.00
1951	Edward G. Dreyfus	147	21	14.3	159.00
1952	James A. Pittman, Jr.	139	3	2.2	18.00
1953	Walter L. Barker	148	10	6.8	201.11
Class Totals		5,391	762	14.1	$26,494.11
Contributions from Friends			5		70.00
TOTAL			767		$26,564.11

* With Fund Committee.
Third Year for Annual Giving ends June 30, 1954.

Correspondence

Editor's note:—In the October issue the BULLETIN printed the Class Day address for 1953 delivered by Dr. J. Englebert Dunphy, the BULLETIN's former editor. The response to his discussion, as may be judged from the letters received, was enthusiastic and widespread. Several of these letters have been reprinted in part below. Of particular interest to the present editor, embarking on his first issue, are the requests for permission to reprint in other journals, and the variety of sources from which this response came. These two facts cannot but indicate the value of the Harvard Medical Alumni BULLETIN both as an information source for the Alumni and as an agency for the dissemination of thought-provoking ideas to non-Alumni.

Dear Dr. Dunphy:

Having just read your Class Day address in the October Alumni BULLETIN, which always reaches me, albeit slowly, I wanted to write and express my pleasure.

It seems to me that you have analyzed the plight of our age quite properly. Many of the faults in the educational system of the house officer have been brought on by himself, but equally as many by our instructors. The most direct answer to these problems from our point of view, I would think, is *work:* more time spent with the patient, in the library, in the laboratory and with other physicians (house staff and seniors) in the hospital atmosphere. More and more am I struck by the failure of my colleagues to accept the responsibility of full patient care because of the current trend to be off at least every other night and often two in three or three in four. This shunning of responsibility most certainly is not volitional but is a vicious corollary of the present trend to "be finished at 5 o'clock" or, more often, to leave the wards then whether or not the day's chores are completed. I think you have placed emphasis correctly. . .

THOMAS K. OLIVER, JR., '49,
The New York Hospital

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. . . I read with a great deal of enjoyment your article entitled "Nil Desperandum," which was the official Class Day address. I am so enthusiastic about it, and so in accord with its tenor, that I would appreciate very much your permission to duplicate it as an editorial in the *Western Journal of Surgery, Obstetrics and Gynecology*. . .

ROBERT H. RUTHERFORD, '36,
Executive Editor, the *Western Journal of Surgery, Obstetrics and Gynecology*

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. . . I would like to congratulate you on your address, "Nil Desperandum," which appeared in your October BULLETIN. Again we would like permission to reprint your copy in the *Bulletin* of the Cleveland Academy of Medicine, starting at the bottom of the first column on page six ("These factors . . .") and continuing to the end. The things you have to say are very pertinent and very well said, and I think many more people than just those reading the Harvard Alumni BULLETIN should have the advantage of seeing it. . .

DAVID K. SPITLER, '37,
Editor, *Bulletin* of the Cleveland Academy of Medicine

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. . . I would like to sometime discuss with you a little more in detail your plan for creating the more happy medium for certification by the Boards under the medical school hospitals. This I think would be a good plan but you obviously did not have time to discuss it in detail in your address, and perhaps that was not the time for it either. I think perhaps we would do well to decentralize some of the activities that are going on in medicine now such as the matching plan for internships and the proposed matching plan for medical students going to the various medical schools all over the country. To me these particular arrangements are unsatisfactory and although it is a rather hectic time for a man getting an internship, there was a good deal of healthy competition in the days that we took our internships and I think it was all for the good. Perhaps whatever you and I think does not matter much since the trend seems to be towards the Civil Service type of security so common in our bureaucratic government, but it would be a shameful thing to see medicine fall into this without a struggle.

EBEN ALEXANDER, JR., '39,
Wake Forest College, The Bowman Gray School of Medicine

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. . . I have just read your 1953 Class Day Address in the Harvard Alumni BULLETIN. I am

not an Alumnus but as a member of the Faculty I seem to get the BULLETIN at my office.

The thoughts expressed in your rather humorous address neatly describe a very serious problem. It seems we rapidly approach the day when one can go into practice and receive his first old age pension check on the same day. More serious to me is the attitude of the younger men toward night work along ward rounds and substantial case loads. I feel such an article as yours should have wider circulation and would urge you to submit it to the A.M.A. or some other journal of large circulation.

JACK R. EWALT, M.D.,
Commissioner, Department of Mental Health, The Commonwealth of Massachusetts

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. . . Your article "Nil Desperandum" in the Harvard Medical Alumni BULLETIN is so outstanding that I cannot resist a word of praise and congratulations! It is obvious that the question of postgraduate education is dear to your heart and that you have a visionary understanding of the problems entailed. Sometime I hope you will share with us more of your views for the Institute. It is only by comments, criticisms, and suggestions that anything can intelligently grow and better its work. . .

CHARLOTTE W. TROUTWINE,
Executive Secretary, Postgraduate Medical Institute, Massachusetts Medical Society

Necrology

1892

FARRINGTON HASHAM WHIPPLE died at Portland, Maine, October 3, 1953.

1894

CHARLES FREDERICK SWEET died at Pawtucket, Rhode Island, October 19, 1953.

1898

GEORGE BYRON DODGE died at Manchester, New Hampshire, October 9, 1952.

1900

EDWARD FRANCIS WASHBURN BARTOL died at Clinton, Massachusetts, August 6, 1953.

1904

EDWIN WAGNER GEHRING died at Portland, Maine, August 8, 1953.

1905

ROY HAWKES GILPATRICK died at Cocoa, Florida, October 10, 1953.

1911

CHRIST ALEXANDER PATTAJO died at East Boston, Massachusetts, June 11, 1953.

1914

RICHARD AUGUSTINE ROCHFORD died at Springfield, Massachusetts, September 10, 1953.

1915

VERNON EDGAR BABINGTON died at Providence, Rhode Island, May 30, 1953.

1918

SIMON ALBERT died at Providence, Rhode Island, May 3, 1953.

FRED S. THORNE died at Newton, Massachusetts, December 6, 1953.

1923

LELAND HARRIS TAYLOR died at Oakland, California, September 21, 1953.